

The TAPS Pyramid

School self evaluation tool from
Teacher Assessment in Primary Science (TAPS)

April 2020



THE TAPS PYRAMID MODEL

The Teacher Assessment in Primary Science (TAPS) project is based at Bath Spa University and funded by the Primary Science Teaching Trust (PSTT). TAPS aims to develop support for valid, reliable and manageable assessment, which will have a positive impact on children's learning.

The TAPS Pyramid model recommends that the rich formative assessment data collected by teachers in the course of ongoing classroom work in science also serves summative reporting purposes. Assessment information flows from classroom practice to whole school reporting. This flow of information is represented by the **ORANGE ARROW** in Figure 1.

Since 2013, the TAPS team has worked with project schools, the Primary Science Quality Mark and PSTT College Fellows across the UK to create and exemplify the TAPS Pyramid model of teacher assessment.

The TAPS Pyramid provides a framework to support science subject leaders in identifying strengths and areas for development in school assessment systems. The suggestions in each box aim to strengthen the validity, reliability and manageability of assessment in primary science.

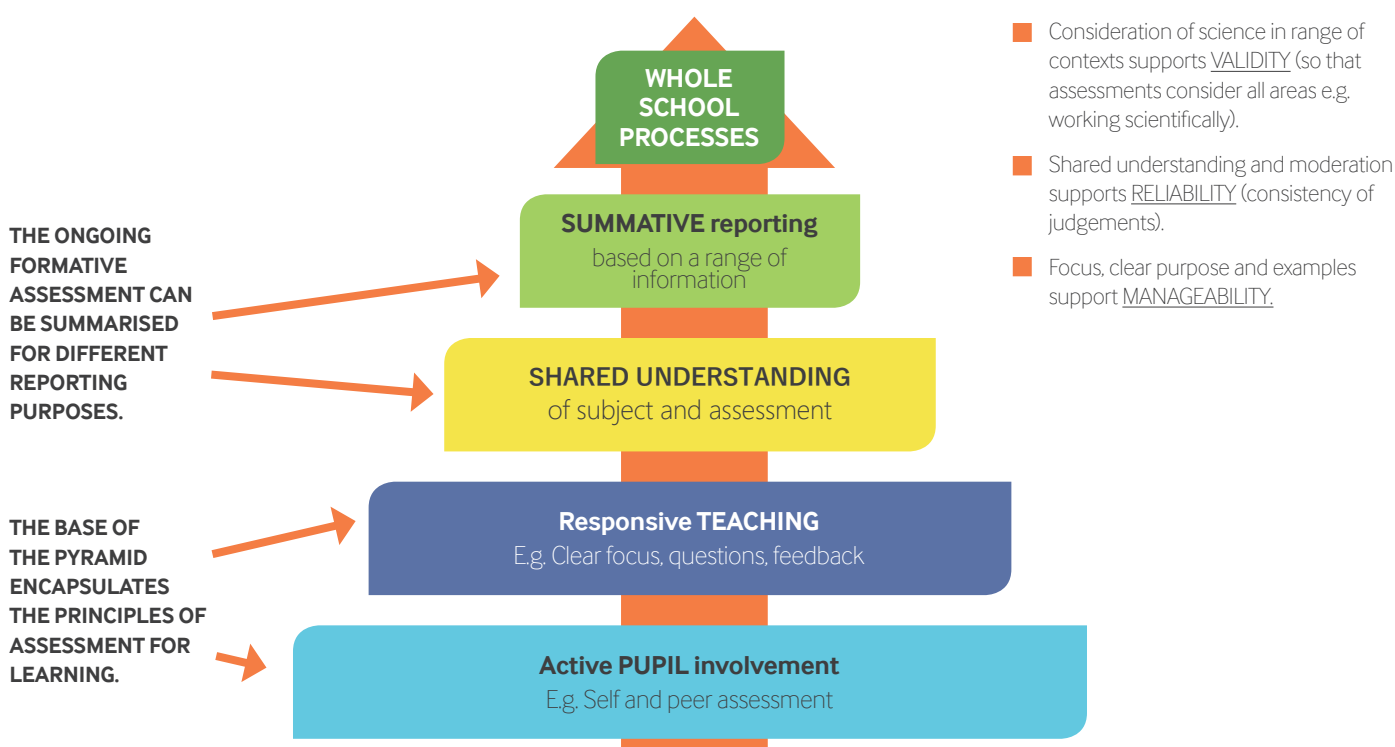


Figure 1: TAPS Key Principles Pyramid

Where to start

Many schools have found it useful to begin by trying some TAPS Focused Assessment activities, as they help to raise the profile of science and offer a clear focus for teaching and assessment.

Class teachers have found it useful to look at the blue 'Pupil layer' and 'Teacher layer' as they encapsulate the principles of Assessment for Learning. Boxes in these layers include: clear learning objectives or success criteria; use of questioning, feedback and next steps; peer and self assessment.

Science subject leaders have found it useful to look at the yellow 'Shared Understanding' layer as this helps develop an understanding of progression across the school.

The TAPS Pyramid provides a structure to support school self evaluation. The boxes on the next page can be used as a checklist, with the option of a traffic light system to record evaluations made.

A wide range of supporting examples from across the UK are available on the TAPS Pyramid website:

<https://taps.pstt.org.uk>

For the TAPS Focused Assessment plans and examples linked to year groups and topics, go to:

<https://pstt.org.uk/resources/curriculum-materials/assessment>

TAPS project team

TAPS project lead: Dr Sarah Earle

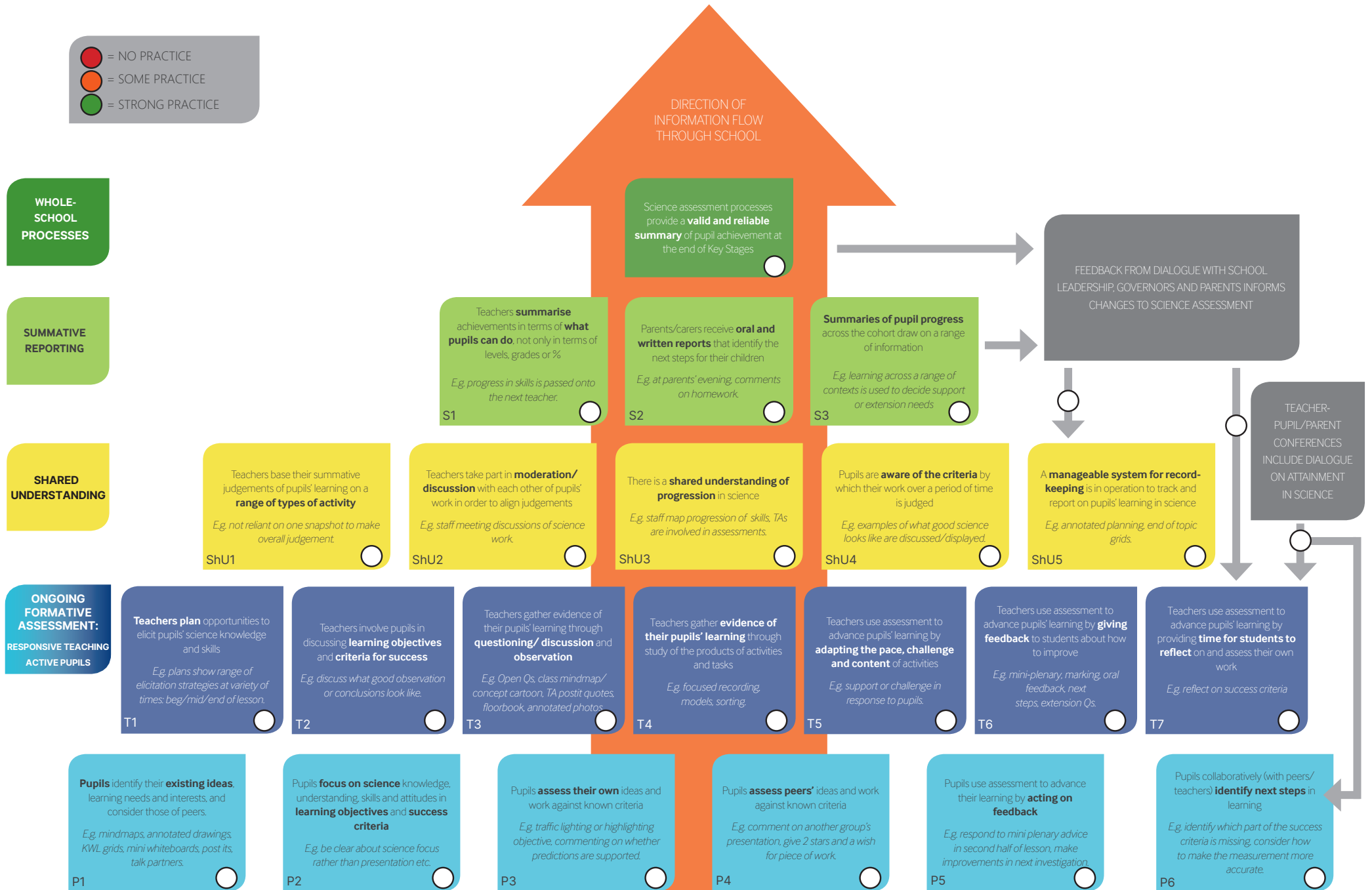
Bath Spa TAPS Pyramid development team 2013-19: Dr Kendra McMahon, Prof. Dan Davies, Alan Howe, Chris Collier and Kerry-Anne Barber

Science assessment: TAPS Pyramid school self-evaluation tool

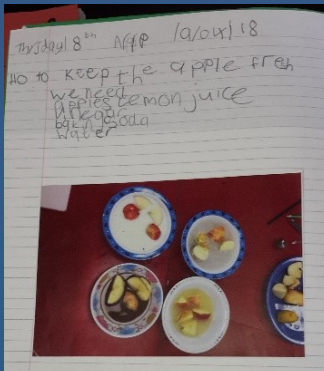
SCHOOL:

DATE:

- = NO PRACTICE
- = SOME PRACTICE
- = STRONG PRACTICE



Examples of practice from across the UK



TAPS FOCUSED ASSESSMENT

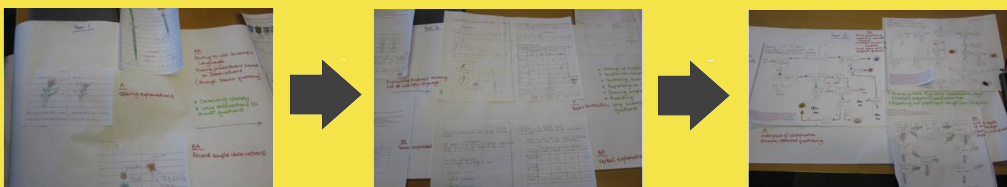
The TAPS Focused Assessment approach embeds assessment within classroom primary science activities. Within the context of a whole investigation teachers and children focus on one part of an enquiry at a time. Any recording of children's learning is around the focused element. Over time, the full range of children's science enquiry skills and understanding of science can be considered in depth.

TAPS-NI schools used both pre-existing TAPS plans like *Rocket mice* and created a new set of activity plans linked to the World Around Us curriculum. For example, *Bottle flipping* from Fairview, *Cupcake parachutes* from Thompson, *Brown apples* from Kilronan and *Scavenger sort* from St Colmcilles.

MODERATION FOR PROFESSIONAL LEARNING



Moderation discussions, in year groups, schools and clusters, support consistency of expectations and judgements. At Worlebury St Paul's Primary, a staff meeting addressed concerns about explicit teaching of Working Scientifically. Staff created a 'moderation graffiti wall' by placing examples of enquiry work from Y1 to Y6 along a roll of paper. This enabled teachers to discuss progression of skills and the development of independence in investigations. Other schools across England have created similar graffiti walls with, for example, a focus on recording results or drawing conclusions. Others have completed a whole school investigation based on one of the TAPS focused assessment activities like rocket mice or dunking biscuits to help compare outcomes and support discussion of progression.



USING SELF AND PEER ASSESSMENT

Children can assess their own and their peers' work if they have a clear idea about 'what a good one looks like'. For example, at Shaw Primary discussion of the features of a good branching key in Y4 or modelling of the Earth's orbit around the Sun in Y5, helped the pupils to check each other's work in the middle of the lesson. They then had time to act on feedback to improve their own keys or solar system modelling. Holt Primary developed a science skills toolkit: a picture-based success criteria to help KS1 children consider which skills they had used that day.

RECORDING DISCUSSION IN FLOOR BOOKS

A floor book is a homemade book which provides a record of shared activity and discussion. Older children may choose to write on post-its or in different coloured pens, while for younger children an adult can scribe the children's comments. At Tongwynlais Primary in Cardiff, rich science activities are recorded through a class floor book, particularly in the Foundation Phase. Their floor book includes collated digital annotations (e.g. PicCollage) and handwritten notes of the children's comments during investigations. A group or class book creates a record of how the children's ideas have developed. For further information on how to use floor books go to: <https://pstt.org.uk/resources/curriculum-materials/floor-books>

SHARED UNDERSTANDING

Many TAPS schools have worked on developing a shared understanding of what progress looks like in primary science. For example, Victoria Park Primary developed a Working Scientifically Butterfly to help with focus and coverage of skills. The TAPS team have combined this idea with the Plan-Do-Review cycle to create a new Working Scientifically Wheel which can be displayed in classrooms and annotated for focused skills.

Mearns Primary in Scotland developed shared understanding of enquiry types by supporting staff to identify and plan for different types of enquiry. For example, observing ice over time, classifying materials, fair testing magnets, researching microplastics and pattern seeking on the beach. Making and displaying posters of enquiry types, which were subsequently referred to in lessons, helped children to identify a wide range of science enquiries.



For the TAPS Focused Assessment plans and examples linked to year groups and topics, go to:

www.pstt.org.uk/resources/curriculum-materials/assessment

For examples of science assessment across a range of schools, go to the new TAPS pyramid website:

<https://taps.pstt.org.uk>

If you would like to offer further examples or to provide the TAPS team with feedback, please email:

primary.science@bathspa.ac.uk

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